

Remarks

Favorable reconsideration of this application is respectfully requested. Claim 20 is amended to include the limitations of original claims 21 and 22 and is further supported for instance at page 4 of Applicant's original disclosure. Claims 21 and 22 have been canceled accordingly. Claims 23, 25, 26, 28, 31-33, and 35-37 have been editorially revised to address formal issues and amended to change claim dependencies in view of canceled claims. Further, Figs. 1-6 as originally filed in the PCT International application are submitted in a New Sheet as the translation of these figures were inadvertently omitted when the national stage application was filed. No new matter has been added by the above amendments. Claims 20 and 23-37 are pending.

Applicant notes that the certified copies of the priority documents of this PCT National Stage application have not yet been received at the USPTO. In view of this, Applicant submits for the Examiner's convenience a certified copy of both priority documents CN 03159561.8 filed on September 23, 2003 and CN 20040071514.2 filed on July 7, 2004. Applicant respectfully requests that these be entered into the record and their receipt be acknowledged.

Claim Rejections 35 U.S.C. §112

Claims 21-23, 25, 26, 31, 32, and 35-37 are rejected under 35 U.S.C. 112, second paragraph as being indefinite. Applicant respectfully traverses the rejection.

Claims 21 and 23 are rejected because the limitation "bottom foot" lacks antecedent basis. The rejection as to claim 21 is moot, since claim 21 has been canceled. The subject matter of claim 21 has been written into claim 20, and Applicant respectfully submits that the revision of claim 20 has been written to address this antecedent basis issue. Claim 23 depends upon claim 20, which has been written to address the antecedent basis issue. Thus, claim 23 is definite.

Claims 22, 25, and 26 are rejected because the limitation "said/the supporting slope" lacks antecedent basis. The rejection is rendered moot as to claim 22, since claim 22 has been canceled. The subject matter of claim 22 has been written into claim 20, and Applicant respectfully submits that the revision of claim 20 has been written to address

this antecedent basis issue, where both left and right supporting slopes are recited. Regarding claims 25 and 26, revisions have been made to make the language consistent with claim 20, thereby addressing the lack of antecedent basis issue. Thus, claims 25 and 26 are definite.

Claims 31 and 32 are rejected because the limitation “at the intersection between the walls” lacks antecedent basis. Claims 31 and 32 have been revised to address the antecedent basis issue. Applicant respectfully submits that claims 31 and 32 are definite.

Claim 35 is rejected because it is not clear how the block engages with the top surface of the girder when the projecting piece is provided on the top surface of the girder, and because it is not clear how there is a groove on the bottom surface of the girder engaged with the top surface of the block when the block engages the top surface of the girder. Applicant respectfully submits that claim 35 is definite. Referring to one example in Applicant’s original disclosure at Fig. 65 and its relevant descriptions, the lower portion shows how the groove of the block engages with a projecting piece (see e.g. 28) at the top surface of one girder. Further the upper portion shows how the groove (see e.g. 29) on the bottom surface of another girder that engages with the top surface of the block. Thus, claim 35 is definite.

Claim 36 is rejected because the limitations “the same layer”, “in vertically layers”, “the lower isolation sub-layer”, “the upper sub-layer”, and “the joint between the upper isolation sub-layers” lack antecedent basis. Claim 36 has been revised to remove the lack of antecedent basis issues. Claim 36 is definite.

Claim 37 is rejected because it is unclear how the block can have the shape of a downward recess as claimed in claim 33 and have a shape of an elongated plate as in claim 37. Applicant respectfully submits that claim 37 is definite. Referring to one example of Applicant’s original disclosure at Figs. 91-97 and the relevant descriptions, the block can be of a shape of elongated plate (longitudinal direction) while having a downward recess (cross section). Claim 37 is definite.

In view of the foregoing, Applicant respectfully submits that the claims are definite. Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claim Rejections- 35 U.S.C. §102

Claims 20-29 and 36 have been rejected under 35 U.S.C. 102(b) as being anticipated by Bouchard et al. (US 6108995 D1). Applicant respectfully traverses this rejection.

Claim 20 is directed to a block for forming a wall, wherein a plurality of analogous blocks being overlapped staggeringly and continuously in the wall. Claim 20 recites, among other features, blocks being shaped and sized such that, when three analogous blocks being overlapped vertically, the top of the ridge of the bottommost block being higher than a bottom foot of the uppermost block.

Bouchard et al., however, does not disclose or suggest claim 20. Namely, the reference fails to disclose or suggest blocks being shaped and sized such that, when the three analogous blocks being overlapped vertically, the top of the ridge of the bottommost block being higher than a bottom foot of the uppermost block.

Claim 20 further recites left and right supporting slopes that include an upper slope portion and a lower shoulder. The block of Bouchard et al., however, is completely different from the block of claim 20 (a similar example of which is also shown in Figure 2 of the Applicant's disclosure), and merely provides a function of one-side leak proof but has disadvantages as mentioned in Applicant's Background. In particular, Bouchard et al. defines "a wall face" (see e.g. line 4 of claim 1). Thus, to constitute a wall structure, a supporting 2 structure (such as a furring 156 as shown in Fig. 25 of Bouchard et al.) must be employed, and a connecting device (such as a screw 157 as shown in Fig. 25 of Bouchard et al.) is also needed to attach the block to the supporting structure.

In other words, since such a supporting structure and a connecting device are needed in Bouchard et al., the block of Bouchard et al. cannot satisfy the block recited by claim 20. Consequently, such a difference in the supporting slopes of claim 20 from that of Bouchard et al. renders the reference deficient for a blocking structure at the left side (see e.g. Figs. 24 and 25 of Bouchard et al.). Even further, Bouchard et al. shows a top intermediate face element 18 and tongue interlock element 15, without a lower shoulder. That is, at least the right side of the block in Bouchard et al. does not include such a shoulder.

For at least the foregoing reasons, claim 20 is not anticipated by Bouchard et al.

Applicant respectfully submits that claim 20 is patentable over the cited reference.

Claims 23-29 depend upon and further limit claim 20, and are patentable for at least the same reasons as specified with respect to claim 20. Applicant does not concede the correctness of the rejection as to the dependent claims.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claims 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Dwyer et al. (US 1,686,270 D2). Applicant respectfully traverses the rejection.

Claim 30 is directed to a block assembly. Claim 30 includes similar features as claim 20 in that a left supporting slope and the right supporting slope include an upper slope portion and a lower shoulder, respectively. The shoulder has a top shoulder surface, a bottom shoulder surface, and a lateral side surface. The top shoulder surface, the upper slope portion and the mid ridge constitute the top surface. Claim 30 further recites that the bottom shoulder surface is horizontal, where the bottom shoulder surface and a bottom foot on one side are at the same plane.

Claim 30, however, is not anticipated by Dwyer et al. In particular, Dwyer et al. fails to disclose or suggest the feature of the bottom shoulder surface being horizontal, and where the bottom shoulder surface and a bottom foot on one side being at the same plane. Rather, Dwyer et al. shows a triangular-shaped rib 13 that engages with the groove 11 of a similar shape so as to realize a good interlocked engagement (see Fig. 5 of Dwyer et al). Such a structure does not satisfy the features of claim 30 and is clearly different from the block assembly of claim 30.

Moreover, claim 30 recites blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, the vertical distance between the top of the ridge of the bottommost block and the bottom foot of the uppermost block being less than one third of the height of one block. Dwyer et al. also fails to disclose or suggest such features. From a leak-proof angle in Dwyer et al., the bottom foot of the uppermost block would be at the water level (dotted line), which is higher than the apex point of the bottommost block, and thus the structure shown in Dwyer et al. does not satisfy claim 30.

For at least the foregoing reasons, claim 30 is not anticipated by Dwyer et al. Applicant respectfully submits that claim 30 is patentable over the cited reference.

Claims 31 and 32 depend upon and further limit claim 30, and are patentable for at least the same reasons as specified with respect to claim 30. Applicant does not concede the correctness of the rejection as to the dependent claims.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claims 33 and 36-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Bouchard et al. or Dwyer et al. (both above). Applicant respectfully traverses the rejection.

Claim 33 includes similar features as recited in claims 20 and 30. Claim 33 recites, among other features, that the left supporting slope and the right supporting slope including an upper slope portion and a lower shoulder, respectively. The shoulder has a top shoulder surface, a bottom shoulder surface, and a lateral side surface. The top shoulder surface, the upper slope portion and the mid ridge constitute the top surface, the bottom shoulder surface is horizontal, where the bottom shoulder surface and a bottom foot on one side are at the same plane. Claim 33 further recites that, when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the upper slope portion being engaged with a downward-flared shaped recess of the upper analogous block. Even further claim 33 recites blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, the vertical distance between the top of the ridge of the bottommost block and the bottom foot of the uppermost block being less than one third of the height of one block.

Deficiencies of Bouchard et al. and Dwyer et al. are discussed above in detail. Claim 33 includes many of the limitations discussed above with respect to claims 20 and 30. Thus, for at least the previous reasons with respect to claims 20 and 30, claim 33 also is not anticipated by any of Bouchard et al. and Dwyer et al. Applicant respectfully submits that claim 33 is patentable over the cited references.

Claims 36 and 37 depend upon and further limit claim 33, and are patentable for at least the same reasons as claim 33. Applicant does not concede the correctness of the

rejection as to the dependent claims.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claims Rejections- 35 U.S.C. §103(a)

Claims 34-35 are rejected under 35 U.S.C. 103(a) as being obvious over Gravier et al. (US 5,624,797 D3) in view of Dwyer et al. and Bouchard et al. (above).

Claims 34 and 35 depend upon and further limit claim 33. Claim 33 is distinguished over Dwyer et al. and Bouchard et al. for at least the reasons discussed above with respect to the independent claims. Thus, claims 34 and 35 are patentable over Dwyer et al. and Bouchard et al. for at least the same reasons as claim 33. Gravier et al. does not remedy the deficiencies of Dwyer et al. and Bouchard et al. Applicant does not concede the correctness of the application of Gravier et al. to any of claims 34 and 35.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above amendments and remarks, Applicant respectfully requests favorable reconsideration of this application in the form of a Notice of Allowance. If any questions arise regarding this communication, the Examiner is invited to contact Applicant's representative listed below.



Dated: September 18, 2009

Respectfully submitted,

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